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ScienceDirect

Procedia - Social and Behavioral Sciences 131 (2014) 29 – 34

Procedia
Social and Behavioral Sciences

WCETR 2013

MOOCs Motivation and Communication in the Cyber Learning Environment

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Abstract

Technological promises to change education have been around for years.. The latest incarnations of tech-as-game-changer are Massive Open Online Courses, or MOOCs. The adoption of this course format by prestigious universities worldwide has sparked discussion about the future of education, or at the minimum, the future of academia's role in it. Data shows that while a typical MOOC may attract thousands of participants, less than 10% will complete the course. A lot of education scientists have been talking about "changing education paradigm" (Robinson, 2011) recently, pointing out that the power of technology has caused fundamental changes in all aspects of our lives, including education process. This paper examines how learning styles can affect motivation MOOC participants, and how individual learning styles can be included the design and implementation of such courses.

Keywords:

1. Introduction

It is well accepted that when teachers are able to analyse their own teaching techniques and analyse the difference and needs of their students, the educational process is likely to become optimised for both students and teachers (Fairhurst & Fairhurst, 1995). A lot of education scientists have been talking about "changing education paradigm" (Robinson, 2011) recently; pointing out that the power of technology has caused fundamental changes in all aspects of our lives, including education process. We should know more about how students perceive and distribute information, which is closely connected for instance with terms like divergent thinking or "active learning"

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doi:10.1016/j.sbspro.2014.04.074

(Beránek and Remeš, 2012). To reflect the upcoming changes is important as the need to modify the standardised one dimension type of learning and teaching has been growing. By all means, we are living in the most intensely stimulating period.

Besides e-learning, which is inevitable part of present, distant, combined and lifelong learning, since 2011 a type of course known as Massive Online Open Courses (MOOCs) has garnered much press, especially in Canadian and US universities A MOOC is an online course with the option of free and open registration, a publicly shared curriculum, and open-ended outcomes. MOOCs integrate social networking, accessible online resources, and are facilitated by leading practitioners in the field of study. MOOCs not only integrate the connectivity of social networking, the facilitation of an acknowledged expert in a field of study, and a collection of freely accessible online resources, but most importantly, build on the active engagement of "students" who self-organize their participation according to learning goals, prior knowledge and skills, and common interests. (McAuley, A.,2010) This model of education is championed by people who see it as the democratization of learning.

1.1. MOOCs Background and Structure

The term MOOC was first used in 2008 to describe a course offered in Canada in which the enrolment was opened online to anyone, and more than 2000 people signed up for the course. The only difference was that the online participants wouldn't receive credit, whereas the university students would. A similar online course on artificial intelligence offered by Stanford was opened in 2011 and close to a quarter million people signed up for it. The notoriety of this and similar examples prompted a debate in the media and educational journals about the latest future of education. Universities rushed to put as much of their courses online, for free. The results now range from standard e learning courses which are opened to the public, to for profit corporations working in conjunction with universities to create proprietary systems for delivering courses. The most basic characteristic of a MOOC is that it is online, and it is free. A huge variety of courses now exist that begin with those parameters.

Two types of MOOCs are now commonly discussed. The first is based on the connectivism theory of learning, which favours networks of learners evolving informally. These are known as cMOOCs. The type known as x MOOCs are more traditional, content based, and more closely resemble traditional educational models. A content-based, xMOOC is more likely to have one or several lecturers, usually delivering lectures via YouTube style videos, with tasks and discussions taking place online via proprietary software. This organization allows the university to incorporate the MOOC into the existing curricula. Deadlines for completing tasks, and an online form of continuous assessment allow the course administrators to assign marks and credits. Online participants who are not interested in obtaining credits can participate, or not as they wish.

1.2. Criticisms

The most common criticism of these online courses is the often cited figure of 90% of people who sign up for these courses don't complete them. If the motivation for a course participant is simply to gain some new information, and they are not seeking a university credit, then the novelty of a new set of ideas wears off as the work involved to complete the course begins to increase. Also, the nature of the media used to access the course may be a distraction great enough to dissuade participants from finishing.

Another concern is quality. The loose structure of many of these courses makes quality assurance or even measuring obtainable learning goals difficult, as is the case with much self-directed learning. Traditional academics who distrust this format may be voicing legitimate concerns about standards and quality, or they may be expressing the fears typical of any monopolist who is unexpectedly confronted with real competition.

On the larger scale, the sustainability of these courses has been called into question. One observer noted that the meteoric rise of MOOCs parallels the history of many internet start-ups in Silicon Valley: they begin by building very fast and worry about making money later. The lack of a clearly defined business model associated with MOOCs, or at least those run for profit, could lead to their demise in the near future. This could be significant for universities which view joining the MOOC party as a way of dealing with shrinking budgets and rising costs. The dream is tempting: manage a stable of interactive, online courses, make money (somehow) for providing this service, and reduce or eliminate the costly liabilities of teacher's salaries, buildings and administration. The reality is

that, no matter how exciting the technology, good teaching will always have a place in the learning process, and won't be easily replaced.

1.3. Implications

The implications of this teaching platform are manifold. For students in universities, or interested learners anywhere with access to the internet, this platform offers a relatively quick and easy way to gain new knowledge. It offers more choice and is delivered via technology that most of them use daily. The downside would be that the ease of entry is more than matched by the ease of exit, as witnessed in the extremely high non-completion rates.

For educators, MOOCs represent another item in their toolbox. Due to the open nature of the format, it introduces dynamics that are not present in e learning. And because we are still in the early stages of development, MOOCs offer a way to experiment creatively with the technology, and hopefully improve both the teaching and learning experience. They also provide the opportunity to offer an online environment where students can discuss and share ideas informally, outside of the classroom. The downside would be that lazy teaching could simply be moved online, reducing contact and involvement with the learner, which is arguably at the heart of the learning process.

For Universities, MOOCs offer the great potential for building and extending the university as a brand. Harvard and MIT use their edX format to showcase their world-class offerings, and the networked nature of the platform expands the reach of their courses to partners and students who might never otherwise have access. MOOCs which feature partners in the private sector give participants the chance to share experiences of professionals who are not in academia, a potentially useful thing for ambitious students, as well as for universities which can benefit from such partnerships. As well as being a potential cost cutter, having a selection of MOOC courses could position a university as a trusted access point for global learning. This could be very interesting for university administrators, if and when a business model is developed that can keep the courses free to the user, but still generate revenue for the partner institutions. The downside could be that the reputation of an institution can be quickly and severely damaged if the course or service they offer is not of high quality. The internet can be a cruel thing, as any reader of YouTube comments will know; the anonymity and easy access of online forums can create a place full of vicious vulgarity and lighthearted silliness. To have a school's reputation put at the mercy of such an environment may be a risk some administrators won't want to take.

For education policy makers, MOOCs offer the chance to both cut costs as well as offer universal education for all. The trend towards open education means a deep rethinking about the goals, process and content of education. Taken broadly, it could be argued that Universities are losing their monopoly position as the gatekeepers of knowledge. If a talented and motivated programmer, for example, can take MOOC courses from MIT and CalTech, and gain useful knowledge, then why should he/she bother sitting in a classroom for 3 to 5 years? The way in which administrators and educational policy makers answer that question can have significant ramifications.

1.4. *Recommendations*

At the heart of any effective learning is a motivated learner. MOOCs have the potential, at least, to offer anyone with an internet connection and the desire to learn with a positive learning experience. And as learning style is one of the concepts that are postulated by researchers to depict learners' differences and varied needs, we offer suggest that a reasoned study of MOOC participants and their learning styles be conducted. The ways that people go about collecting, interpreting and proceeding information can be surprisingly different. Worldwide research shows that people do have different preferences sometimes referred to as learning styles and are used to describe and help us (teachers) understand the ways in which different students learn.

Therefore, the present study aims first to depict learning style difference among a sample group of students of Faculty of Informatics and Management and second to analyse the contemporary model of MOOCs courses with a special view to the role of the LS preferences when designing massive open online courses.

Research questions:

1. How do English as foreign language students in the Faculty of Informatics and Management vary in their preference for particular learning styles?

2. How can be the knowledge of students' LS preferences used in relation to new development in MOOCs?

2. Methodology

2.1. Learning style theory and definition of Felder-Silverman model of LS

The preferences, or as they are often called, "learning styles," are the result of a complex interaction of age, educational experience, and cultural background. In order to facilitate academic success of our university students which is influenced by emotional, biological, psychological, and cultural factors, it is important to provide learning experiences that are accessible to all students with all learning preferences.

Learning style is one of the concepts that are postulated by researchers to depict learners' differences and varied needs. Richard M. Felder based his Individual learning style model on Dr. Silverman's expertise in educational psychology and his experience in technical (engineering) education. That is why we decided to use his model in our university research. Felder defines individual learning styles as follows "The ways in which an individual characteristically acquires, retains, and retrieves information are collectively termed the individual's learning style". (Felder, 1995) Felder´s model describes five dichotomous learning style dimensions, which indicate the students´ preferences for certain poles of the dimensions, (see Fig. 1) namely Sensing or Intuitive , Visual or Verbal , Active or Reflective, Global or Sequential, Inductive or Deductive. The last named dimension is not assessed in Index of Learning Styles (ILS) because as Felder states it "…the "best" method of teaching is inductive, whether it be called problem-based learning, discovery learning, inquiry learning, or some variation on the same theme."(Felder, 2012)

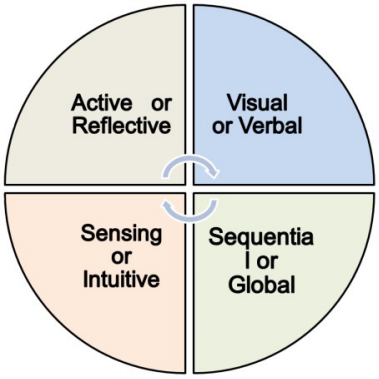

Fig. 1: Learning style dimensions

2.2. Index of Learning style (ILS)

The Index of Learning Styles (ILS) is a self-scoring web-based instrument that assesses preferences on the Sensing/Intuiting, Visual/Verbal, Active/Reflective, and Sequential/Global dimensions. The forty-four multiple choice questions in the questionnaire reflect the psychological and behavioural characteristics of four dichotomous dimensions of learning styles mentioned above. Questions in this questionnaire are written in English and the two choices in each question reflect the two dichotomous learning styles. Students indicate their preference to either of these two answers depending on their normal practice. After submitting their answers, students are provided with Learning Style Results, (see Fig. 2) where if their score on a scale is 1-3, they are considered fairly well balanced on the two dimensions of that scale. If their score on a scale is 5-7, they have a moderate preference for one dimension of the scale and will learn more easily in a teaching environment which favours that dimension and if their score on a scale is 9-11, they have a very strong preference for one dimension of the scale and are classified as purely single style learners, which may cause struggling and suffering when learning in an environment which does not support their preference.

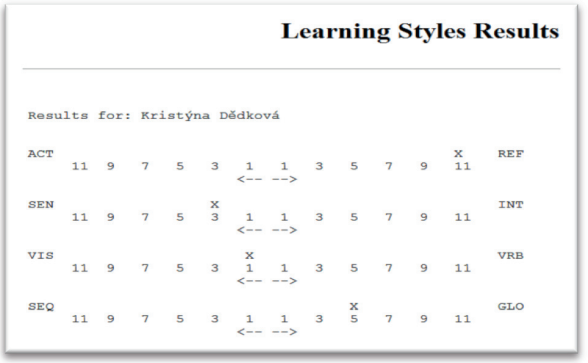

Fig. 2: Learning Styles Result

3. Results

The instrument used in this study to assess students' learning style preference was the Index of Learning Styles questionnaire devised by Felder and Soloman (Felder and Soloman, 2007). The participants in this study were 132 first-year university students of Faculty of Informatics and Management. The students majored in two disciplines including Management of Tourism (n=82) and Applied Informatics (n=50). Among the participants, 53 were males and 81 were females. The study was conducted during the first semester of their first academic year.
Students were asked to fill out the Index of Learning Styles questionnaire according to their usual practice. The Index was installed in BB Professional English language on-line courses and it took an average of around 40 minutes to complete it. Figure 3 and Figure 4 indicate that the students do vary in their preference for particular learning styles. A large number of students share preference to Sensing dimension of learning style (109 students – 83%) and Visual dimension of learning style (107 students – 81%), there are, however, considerably large groups of students displaying preference to Active (78 students – 59%) and Sequential (77 students – 58%) dimensions of learning style (LS).

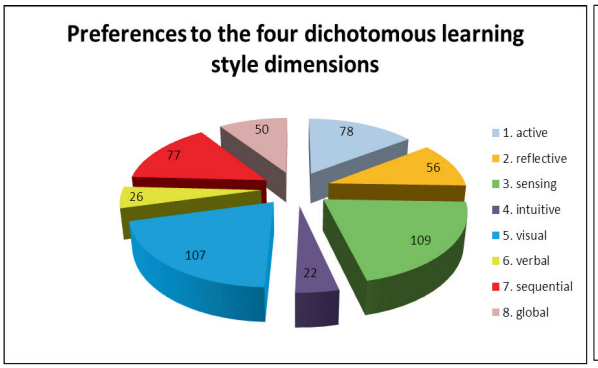

Fig. 3: Overall preferences

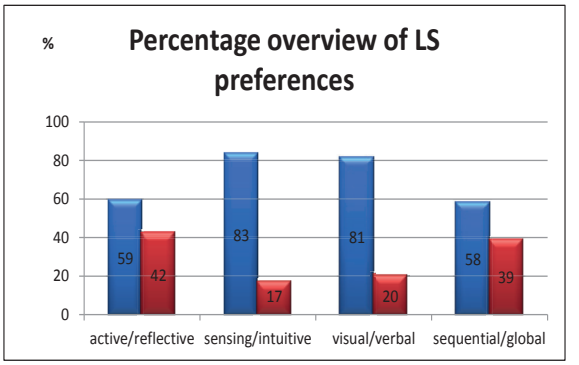

Fig. 4: Percentage overview of LS preference

4. Conclusion

To conclude, the assessment of learning style preferences in both groups of new first year students will continue in winter semester 2013 to obtain wider view and better understanding for students' preferences for different learning styles. Based on recently collected data from Felder´s ILS, which was implemented into on-line Professional English language courses in Blackboard, the author identified that students vary in their preference for particular learning styles with a great variety of learning style preferences. A considerably large number of students showed mild preference to Visual, Active and Sequential learning styles. The finding that some students showed

strong preference to Sensing (83%) and Visual (81%) learning styles suggests that they would find it hard to fit into a learning environment that does not reflex their preferences. We can conclude that variability and interactivity which is inevitable part of the above mentioned MOOCs courses supported by new technology and by corresponding teaching styles will consequently result in higher quality of learning. As Sir Ken Robinson states it "human resources are like natural resources; they're often buried deep. You have to go looking for them; they're not just lying around on the surface."

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